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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,178	11/05/2003	Jack V. Henderson	19350-095172	7542

7590

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Mr. Robin W. Asher  
Clark Hill, P.L.C.  
Suite 3500  
500 Woodward Avenue  
Detroit, MI 48226-3435

EXAMINER

ENGLISH, EVAN JAMES

ART UNIT

PAPER NUMBER

3652

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/702,178

Applicant(s)

HENDERSON ET AL.

Examiner

Evan English

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/5/2003.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 14, 16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said channel" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "said channel" is not defined until claim 10. The examiner assumes that the "said channel" in claim 5 should read "a channel."

Claim 14 recites the limitation "said channel" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "said channel" is not defined in this chain of claims. The examiner assumes that the "said channel" in claim 14 should read "a channel."

Claim 16 recites the limitation "said sliding bracket" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim. The "said sliding bracket" is not defined in this chain of claims.

Claim 18 recites the limitation "said channel" in line 2. There is insufficient antecedent basis for this limitation in the claim. The examiner assumes that the "said channel" in claim 18 should read "a channel."

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabry (US 2,931,528).

With respect to claim 1, Mabry discloses a roof rack assembly for storing items above a motor vehicle. The roof rack assembly has a pair of rails 9 fixedly secured to the roof 11, and these rails extend generally parallel to each other. This roof rack assembly includes a tray 1 having a first end 5 with opposite sides slidably engaging the rails 9 and movable between a forward end and an aft end of the rails 9. The roof rack assembly also includes a pair of pivot arms 57 pivotally coupled to opposite sides of a second end 7 of tray 1. Mabry's roof rack assembly includes a storage position (Fig 1) where the tray is at the forward end of the rails and a loading position (Fig 3) where the tray is inclined relative to the vehicle and at the aft end of the rails.

With respect to claim 9, Mabry discloses a roof rack assembly in claim 1 as discussed above including a drive mechanism 70 operatively engaging the tray 1 effecting movement between the storage position and the loading position.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabry.

With respect to claim 2, Mabry discloses a roof rack assembly in claim 1 as discussed above including mounting brackets 39 secured to an aft end of the motor vehicle (see Figs 1-3) and pivotally coupled to the pivot arms 57. Mabry does not disclose that the mounting brackets 39 have a stop for limiting pivotal movement of said pivot arms preventing the tray from moving beyond said loading position. Having a stop would prevent the tray from hitting the ground and being damaged.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the mounting brackets of Mabry to include a stop in order to prevent the tray from being damaged by striking the ground.

With respect to claim 3, Mabry discloses a tray in claim 2 as discussed above including a sliding bracket 53 extending downwardly from the first end 5 of the tray 1 for coupling the tray to the rails 9 (see Figs 4 and 5, the bracket 53 connects the tray 1 to the rails 9 via pipe 51).

With respect to claim 4, Mabry discloses that the pivot arms 57 are pivotally coupled to the tray 1 at numeral 59. Mabry is silent as to exactly how the arms are

coupled to the tray. Having a bracket that extends downward to secure the tray would provide for a more stable assembly.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the coupling 59 of Mabry to include a pivot bracket extending downwardly in order to secure the tray to the pivot arms without interfering with the movement from the storage to loading position and to provide a more stable assembly.

7. Claims 5-8, 14, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabry in view of Kowalski et al. (US 4,295,588).

With respect to claim 5, Mabry discloses a sliding bracket that includes a slide pin 49 extending out therefrom for engaging the rails 9. Mabry does not disclose that the sliding bracket includes a slide pin for engaging a channel.

Kowalski et al. discloses a channel 12 in which a sliding pin 52 can slidingly engage.

It would be obvious to one having ordinary skill in the art at the time the invention was made to have included a channel to use as the rail as taught by Kowalski et al. to the roof rack assembly of Mabry in order to prevent the pin from disengaging the rail during operation or transportation.

With respect to claim 6, Mabry discloses a pivot coupling 59 in claim 4 as discussed above. Mabry is silent as to the details of this pivot coupling. Having a bracket that extends downward to secure the tray would provide for a more stable assembly.

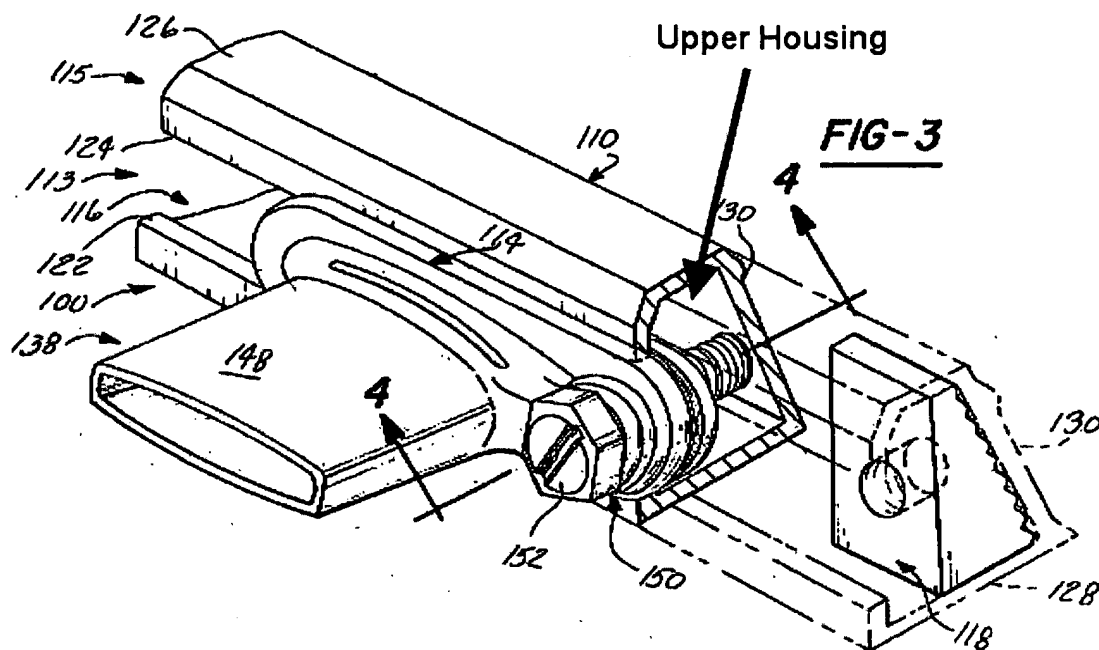
It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the pivot coupling 59 to include a bracket extending downwardly and to include a pivot pin in order to secure the tray to the pivot arms without interfering with the movement from the storage to loading position and to provide a more stable assembly.

With respect to claim 7, Mabry discloses a slide pin in claim 6 as discussed above including a roller 47 secured thereto for enabling smooth sliding engagement of the tray along the rails.

With respect to claim 8, Mabry discloses a tray 1 in claim 7 as discussed above including a pair of storage ramps 3 for retaining the items in place along said tray.

With respect to claim 14, Mabry does not disclose an upper housing disposed above a channel and extending along a portion thereof.

Kowalski et al. discloses an upper housing disposed above a channel and extending along a portion thereof as shown below.



It would be obvious to one having ordinary skill in the art at the time the invention was made to include the upper housing on the channel as taught by Kowalski et al. to the roof rack assembly of Mabry in order to prevent the pin from being easily removable from the channel by allowing it to extend upwardly inside the channel.

With respect to claim 15, Mabry does not disclose a link arm pivotally extending between one of the rails and the tray.

Kowalski et al. discloses a link arm 114 pivotally extending between one of the rails 110 and the tray 148 for maintaining the tray in the loading position. Kowalski et al. further discloses that the fasteners connecting the link arm to the rail can be tightened to force the support against the wall of the rail to retain the support in a fixed position (see column 1, lines 31-33).



It would be obvious to one having ordinary skill in the art at the time the invention was made to include the link arm as taught by Kowalski et al. to the roof rack assembly of Mabry in order to allow the tray to be restrained from moving either to load the tray or to store it.

With respect to claim 17, Mabry does not disclose a motor connected to the drive mechanism for moving a sliding bracket along the rails. Having a motor connected to a drive mechanism would provide a way to move the tray without manual labor.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to operatively connect a motor to the drive mechanism for moving a sliding bracket along a pair of rails in order to eliminate the need for manual labor to move the tray, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art.

8. Claims 10-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Mabry in view of Nagai et al. (US 6,084,326).

With respect to claim 10, Mabry discloses a pair of rails in claim 9 as discussed above. Mabry does not disclose that these rails define a channel.

Nagai et al. discloses a channel 20 comprising a bottom and sides 22 (see Fig 26).

It would be obvious to one having ordinary skill in the art at the time the invention was made to modify the rails of Mabry by making them a channel as taught by Nagai et

al. in order to reduce the weight of the rail and to reduce the material costs of production.

With respect to claim 11, Mabry does not disclose a drive mechanism that includes a lead screw disposed within a channel and a circular guide threadably engaging the lead screw for moving the tray along the rails.

Nagai et al. discloses a drive mechanism that includes a lead screw 16 disposed within a channel 20 and a circular guide 18 threadably engaged to the lead screw 16 for moving the guide back and forth (see Fig 26). Nagai et al. further discloses that this design provides an actuator that makes it possible to convert rotary motion of a screw into rectilinear motion by using a displacement member (see column 1, lines 40-43).

It would be obvious to one having ordinary skill in the art at the time the invention was made to include the lead screw drive mechanism and circular guide as taught by Nagai et al. to the roof rack assembly of Mabry in order to convert the rotary motion of a screw in to rectilinear motion to move the tray.

With respect to claim 12, Mabry does not disclose a motor driving a lead screw.

Nagai et al. discloses a motor 12 drivingly engaging a lead screw 16 (see Fig 26). Nagai et al. further discloses that the motor is provided as a rotary driving source to rotate the screw.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included a motor to drive the lead screw as taught by Nagai et al. to the roof rack assembly of Mabry in order to provide motorized assistance to replace manual activity.

With respect to claim 13, Mabry discloses a pivot coupling 59 in claim 4 as discussed above. Mabry is silent as to the details of this pivot coupling.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the pivot coupling 59 to include a bracket extending downwardly and to include a pivot pin in order to secure the tray to the pivot arms without interfering with the movement from the storage to loading position.

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mabry in view of Morine et al. (US 3,885,471).

With respect to claim 18, Mabry does not disclose that the drive mechanism includes a belt disposed with a channel.

Morine et al. discloses a belt 22 disposed a channel 10

### ***Allowable Subject Matter***

10. Claim 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan English whose

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telephone number is (571) 272-8971. The examiner can normally be reached on 8:30 a.m. to 5:00 p.m., Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**EILEEN D. LILLIS**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600